ABSTRACT

A tuning apparatus is provided, wherein the on and off resistances of semiconductor switches within an tuning IC are optimized, so as to provide high sensitivity and superior stability, a wide range of tuned frequency variation, compactness and high performance. The tuning apparatus has a tuning circuit, which has N-channel MOS transistors (N transistors) 5a through 5f, serving as a plurality of semiconductor switches, and a counter circuit 6, which controls the opening and closing of the N transistors, a plurality of capacitors 4a through 4f, which are each connected in series with the plurality of N transistors, and a receiving antenna 2 wherein the total electrostatic capacitance of the plurality of capacitors is varied by the opening and closing of the plurality of N transistors, thereby varying the frequency tuned by the plurality of capacitors and the receiving antenna.